

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (previously presented) A method of object manipulation in a computer system comprises:

 displaying a first three-dimensional object on a display, wherein the first three-dimensional object comprises a second three-dimensional object and a third three-dimensional object, wherein the first three-dimensional object has an associated first volume;

 displaying a control indicator on the display, wherein the control indicator is associated with the first three-dimensional object;

 receiving an offset in a first dimension for the control indicator in response to user input with a user input device;

 forming a modified first three-dimensional object having an associated second volume in response to the offset comprising:

 automatically scaling the first three-dimensional object in a first dimension by a first amount in response to the offset of the control indicator; and

 automatically modifying a cross-section of the first three-dimensional object perpendicular to the first dimension in at least a second dimension in response to the offset of the control indicator, in response to the associated first volume, and in response to a constraint;

 wherein the associated second volume is determined in response to the associated first volume; and

 wherein the constraint comprises having a size and a shape of a first end of the first three-dimensional object being equal to a size and a shape of a first end of the modified first three-dimensional object.

2. (previously presented) The method of claim 1

 wherein a shape profile of the third three-dimensional object is different from the shape profile of the modified third three-dimensional object

3. (previously presented) The method of claim 1 wherein the associated first volume is substantially similar to the associated second volume.

4. (original) The method of claim 1 wherein the second volume is less than the first volume.

5. (previously presented) The method of claim 1 wherein automatically scaling the first three-dimensional object in the first dimension comprises increasing a size of the first three-dimensional object in the first dimension.

6. (previously presented) The method of claim 5 wherein automatically modifying the first three-dimensional object in at least the second dimension comprises automatically decreasing the size of a cross-section of the first three-dimensional object in a plane perpendicular to the first dimension, in at least the second dimension.

7. (previously presented) The method of claim 1 wherein automatically scaling the first three-dimensional object in the first dimension comprises decreasing a size of the first three-dimensional object in the first dimension; and

automatically modifying the first three-dimensional object in at least the second dimension comprises automatically increasing the size of a cross-section of the first three-dimensional object in a plane perpendicular to the first dimension, in the second dimension and a third dimension.

8. (previously presented) The method of claim 7 further comprising:
rendering the modified third three-dimensional object to form a rendered object;
and

storing a representation of the rendered object into a memory.

9. (currently amended) A computer-readable medium ~~tangible media~~ including the representation of the rendered object determined in claim 8.

10. (currently amended) A computer program product stored on a computer-readable medium including executable instructions for a computer system including a processor and a display includes:

code that directs the processor to display a representation of a first object and a representation of a second object on the display, wherein the first object has an associated first volume, and the second object has an associated second volume, wherein a third object on the display comprises the first object and the second object and has an associated third volume;

code that directs the processor to determine a volume preservation factor associated with the third object;

code that directs the processor to determine a constraint associated with the third object, wherein the constraint is not associated with the first object or second object;

code that directs the processor to receive an indication of a first modification value for the third object in a first dimension;

code that directs the processor to modify a size of the first object and a size of the second object in the first dimension in response to the first modification value for the third object;

code that directs the processor to determine a second modification value for the first object and the second object in a second dimension in response to the first modification value for the third object, to the constraint associated with the third object and to the volume preservation factor associated with the third object;

code that directs the processor to modify a size of the first object and a size of the second object in the second dimension in response to the second modification value; and

code that directs the processor to display a representation of the first object after modification and the second object after modification on the display;

wherein the first object after modification is associated with a first modified volume;

wherein the first modified volume is determined in response to the volume preservation factor; and

~~wherein the codes reside on a tangible media.~~

11. (original) The computer program product of claim 10

wherein the second object after modification is associated with a second modified volume;

wherein the first volume is approximately equal to the first modified volume; and

wherein the second volume is approximately equal to the second modified volume.

12. (original) The computer program product of claim 11 wherein the volume preservation factor indicates full volume preservation.

13. (Original) The computer program product of claim 10

wherein the volume preservation factor indicates less than full volume preservation; and

wherein the first modified volume is less than the first volume.

14. (original) The computer program product of claim 10

wherein code that directs the processor to modify the size of the first object and the size of the second object in the first dimension comprises code that directs the processor to increase the size of the first object and the size of the second object in the first dimension in response to the first modification value; and

wherein code that directs the processor to modify the size of the first object and the size of the second object in the second dimension comprises code that directs the processor to decrease the size of the first object and the size of the second object in the second dimension in response to the second modification value.

15. (original) The computer program product of claim 10

wherein code that directs the processor to modify the size of the first object and the size of the second object in the first dimension comprises code that directs the processor to decrease the size of the first object and the size of the second object in the first dimension in response to the first modification value; and

wherein code that directs the processor to modify the size of the first object and the size of the second object in the second dimension comprises code that directs the processor to increase the size of the first object and the size of the second object in the second dimension in response to the second modification value.

16. (currently amended) The computer program product of claim 16 15 wherein code that directs the processor to receive an indication of a the first modification value for the third object in a first dimension comprises code that directs the processor to receive an indication of a the first modification value for the third object in a first dimension from a user input device selected from the group consisting of: keyboard, graphical input device, voice input.

17. (previously presented) A graphical user interface for a computer system includes:

a display portion configured to display a representation of a third three-dimensional object comprising a first three-dimensional object and a second three-dimensional object, wherein the first three-dimensional object has an associated first volume, wherein the second three-dimensional object has an associated second volume, and wherein the third three-dimensional object has an associated third volume;

a control icon associated with the third three-dimensional object, wherein a user can specify a modification to the third three-dimensional object in a first dimension via the control icon; and

wherein the display portion is also configured to display a representation of a modified third three-dimensional object, wherein the modified third three-dimensional object comprises the third three-dimensional object that is modified in the first dimension in response to the modification and that is modified in a second dimension in response to the modification, a constraint associated with the third three-dimensional object, and to a volume preservation value, wherein the constraints are not associated with the first three-dimensional object.

18. (original) The graphical user interface of claim 17 further comprising a display portion configured to display a currently selected volume preservation value.

19. (previously presented) The graphical user interface of claim 17 wherein the constraint are not associated with the second three-dimensional object; and

wherein the constraint is selected from a group consisting of: profile constraint, and dimension constraint.

20. (previously presented) The graphical user interface of claim 19 wherein the modification to the third three-dimensional object in the first dimension comprises a modification selected from the group consisting of: lengthening, shortening; and

wherein the modification to the third three-dimensional object is in the second dimension comprises a modification respectively selected from the group consisting of: shortening, lengthening.

21. (previously presented) The graphical user interface of claim 19 wherein the modified third three-dimensional object comprises the third three-dimensional object that is modified in the first dimension in response to the modification, that is modified in a second dimension in response to the modification, to the volume preservation value and to the constraint.